STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.	MO-0023299
Owner:	City of Richland
Address:	204 East Washington Street, PO Box 798, Richland, MO 65556
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Richland Wastewater Treatment Facility
Address:	North Pine Street, Richland, MO 65556
Legal Description:	Outfalls #001 & #002, NE ¼, NW ¼, Sec. 6, T36N, R13W, Pulaski Co. Outfall #003, NW ¼, NE ¼, Sec. 7, T36N, R13W, Pulaski Co.
Receiving Stream:	Unnamed Tributary to Conns Creek (U)
First Classified Stream and ID:	DeBerry Creek (C)(01156)
USGS Basin & Sub-watershed No.:	(10290109-070002)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION:

See page 2

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

July 12, 2002
Effective Date

Stephen M. Mahfood, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

July 11, 2007
Expiration Date

Director of Staff, Clean Water Commission

FACILITY DESCRIPTION (continued)

Outfall #001 – POTW – SIC #4952
Oxidation ditch/clarifier/sludge is being land applied.
Design population equivalent is 3,723.
Design flow is 360,000 gallons per day.
Actual flow is 350,000 gallons per day.
Design sludge production is 74.5 dry tons/year.
Actual sludge production is 72.4 dry tons/year.

Outfall #002 – POTW – SIC #4952
Stormwater retention basin, pumped back to main plant. Normally this will not discharge.
Design flow is 438,000 gallons per day.

Outfall #003 – POTW – SIC #4952
Triple cell peak flow lagoon/sludge is retained in lagoon.
Design flow is 500,000 gallons per day.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	once/weekday**	24 hr. total
Biochemical Oxygen Demand$_5$***	mg/L		45	30	once/month	24 hr. composite
Total Suspended Solids***	mg/L		45	30	once/month	24 hr. composite
Ammonia as N	mg/L	*		*	once/month	grab
pH – Units	SU	****		****	once/month	grab
Outfall #002 – Note 1						
Flow	MGD	*		*	once/discharge/day	24 hr. total
Biochemical Oxygen Demand$_5$	mg/L		45		once/discharge/day	grab
Total Suspended Solids	mg/L		45		once/discharge/day	grab
pH – Units	SU	****		****	once/discharge/day	grab
Outfall #003 – Note 1						
Flow	MGD	*		*	once/day	24 hr. estimate
Biochemical Oxygen Demand$_5$******	mg/L		65	45	once/month*****	grab
Total Suspended Solids******	mg/L		110	70	once/month*****	grab
pH – Units	SU	*******		*******	once/month*****	grab
Downstream Monitoring – downstream from Outfall #001 ********						
Dissolved Oxygen	mg/L	*		*	once/month	grab
Ammonia as N	mg/L	*		*	once/month	grab
pH – Units	SU	*		*	once/month	grab
Temperature	°F	*		*	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE August 28, 2002. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.
** Once each weekday means: Monday, Tuesday, Wednesday, Thursday, and Friday.
*** This facility is required to meet a removal efficiency of 85% or more.
**** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.
***** Monitor only when discharge occurs. Report no discharge if a discharge does not to occur during the report period.
****** This facility is required to meet a removal efficiency of 65% or more.
******* pH is measured in pH units and is not to be averaged. The pH is limited to
******** Ammonia, pH, and temperature shall be monitored monthly at Hwy A (SE, S36, T37N, R14W), when the stream is not affected by storm-water run-off. Dissolved oxygen shall be recorded concurrently, only during the months of May - September. (Dissolved oxygen shall be recorded between 6 and 9 a.m.)

Note 1 – There shall be no discharge during normal operation.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
   (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
      (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
      (2) controls any pollutant not limited in the permit.
   (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

   The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.

4. Changes in Discharges of Toxic Substances

   The permittee shall notify the Director as soon as it knows or has reason to believe:
   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 µg/L);
      (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
      (4) The level established in Part A of the permit by the Director.
   (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

C. SPECIAL CONDITIONS (continued)

5. Report as no-discharge when a discharge does not occur during the report period.

6. General Criteria. The following water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
   (a) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
   (b) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
   (c) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
   (d) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
   (e) There shall be no significant human health hazard from incidental contact with the water;
   (f) There shall be no acute toxicity to livestock or wildlife watering;
   (g) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
   (h) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities
   (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
   (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids that are removed from the domestic wastewater treatment lagoon during lagoon clean-out and maintenance activities. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids from the lagoon. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

Water Quality Review Sheet

Determination of Effluent Limits

Facility Information

FACILITY NAME: Richland WWTF NPDES #: MO0023299

FACILITY TYPE/DESCRIPTION: Oxidation ditch, clarifier; stormwater retention basin, 3-cell peak-flow lagoon.

ECOREGION: Ozark Highlands (Central Irregular Plains / Mississippi Alluvial Plains / Osage Plains / Ozark Highlands) 8- DIGIT HUC: 10290109 COUNTY: Pulaski

LEGAL DESCRIPTION: NE,NW,6,36N,13W LATITUDE/LONGITUDE:

WATER QUALITY HISTORY: I/I, chronic hydraulic overloading. About 0.4 mile of stream impact noted.

Outfall Characteristics

OUTFALL	DESIGN FLOW (CFS)	TREATMENT TYPE	RECEIVING WATERBODY	OTHER
001	0.56	Oxidation ditch	Conn's Cr., (lower end identified as Deberry Creek in WQS).	
002	0.68	Storm-water retention basin	Conn's Cr.	
003	0.77	3-cell peak –flow lagoon	"	

Receiving Waterbody Information

WATERBODY	CLASS	7Q10(CFS)	*DESIGNATED USES	OTHER CHARACTERISTICS
Conn's Cr.	U	0	None	
"Deberry" Cr.(Connn's Cr.)	C	C	AQL,LWW	

*Cool Water Fishery (CLF), Cold Water Fishery (CDF), Irrigation (IRR), Industrial (IND), Boating & Canoeing (BTG), Drinking Water Supply (DWS), Whole Body Contact Recreation (WBC), Protection of Warm-water Aquatic Life and Human Health (AQL), Livestock & Wildlife Watering (LWW)

DILUTION DIMENSIONS

Mixing Zone. ¼ mile (of classified stream)
Zone of Initial Dilution (Z.I.D.). none

Permit Limits And Information

TMDL WATERSHED: (Y OR N) [N] W.L.A. STUDY CONDUCTED: (Y OR N) [N] DISINFECTION REQUIRED: (Y OR N) [N] DISINFECTION WAIVER: (Y, N, NA) [NA]

OUTFALL# 001

WET TEST (Y OR N): [N] FREQUENCY: _____ A.E.C. _____ LIMIT: _____

PARAMETER	MAXIMUM DAILY LIMIT	AVERAGE MONTHLY LIMIT	MONITORING FREQUENCY	SAMPLE TYPE
BOD		30 mg/L	monthly	composite
TSS		30 mg/L	monthly	composite
NH3N		monitoring only	monthly	grab

OUTFALL# 002

WET TEST (Y OR N): [N] FREQUENCY: _____ A.E.C. _____ LIMIT: _____

PARAMETER	MAXIMUM DAILY LIMIT	AVERAGE WEEKLY LIMIT	MONITORING FREQUENCY	SAMPLE TYPE
BOD		45 mg/L	monthly	grab
TSS		45 mg/L	monthly	grab

OUTFALL# 003

WET TEST (Y OR N): N FREQUENCY: _____ A.E.C. _____ LIMIT: _____

PARAMETER	MAXIMUM DAILY LIMIT	AVERAGE MONTHLY LIMIT	MONITORING FREQUENCY	SAMPLE TYPE
BOD		45 mg/L	monthly	grab
TSS		70 mg/L	monthly	grab

Receiving Water Monitoring Requirements

Site: Hwy A, (SE,S36,T37N,R14W)

PARAMETER(S)	SAMPLING FREQUENCY	SAMPLE TYPE	LOCATION
NH3N, pH, temperature	monthly	grab	See above
DISSOLVED OXYGEN	monthly *	grab	

* Dissolved oxygen should be measured during the months of May through September. Readings should be taken before 9 a.m.

Derivation and Discussion of Limits:

With 3 miles of unclassified stream flow between the WWTF and a classified reach, it is unlikely that the WWTF caused violations of dissolved oxygen or ammonia criteria in the classified stream. To confirm this, effluent ammonia monitoring, and in-stream monitoring for ammonia at hwy A (about one mile downstream of the WWTF) should be required; dissolved oxygen should also be measured at that location during the summer months. If criteria violations are found, more extensive physical/chemical sampling and studies by DNR will be conducted to determine an effluent ammonia limit and possibly a reduced BOD limit.

Reviewer: RG
Date: 12-11-01
Unit Chief: MD